**a. Name all angles that have *R* as a**

**vertex.**

Three angles are ∠1, ∠2, and ∠3. For

other angles, use three letters to name them: ∠*SRQ*, ∠*PRT*, and ∠*SRT.*

**b. Name the sides of ∠1.**

,

**1-4**

**1.** Name the vertex of ∠4.

**2.** Name the sides of ∠*BDC.*

**3.** Write another name for ∠*DBC*.

**Classify each angle as *right, acute,* or *obtuse.* Then use**

**a protractor to measure the angle to the nearest degree.**

***right, acute,* or *obtuse.* Then use a**

**protractor to measure the angle to the nearest degree.**

**Measure Angles** If two noncollinear **rays** have a common endpoint, they form an **angle**. The rays are the **sides** of the angle.

The common endpoint is the **vertex**. The angle at the right can be named as ∠*A,* ∠*BAC,* ∠*CAB,* or ∠1.

A **right angle** is an angle whose measure is 90. An **acute angle** has measure less than 90. An **obtuse angle** has measure greater than 90 but less than 180.

**Lesson 1-4**

**Study Guide and Intervention**

***Angle Measure***

*E*

*N*

*S*

*Glencoe Geometry*

Chapter 1

**25**

*R*

*P*

**4.** ∠*MPR*

**5.** ∠*RPN*

**6.** ∠*NPS*

*M*

*C*

*D*

2

1

4

*B*

3

*A*

**Exercises**

**Refer to the figure at the right.**

∠*EBC*

Using a protractor, *m* ∠*EBC* = 90.

∠*EBC* is a right angle.

**c.**

**b.** ∠*DBC*

Using a protractor, *m*∠*DBC* = 115.

180 > 115 > 90, so ∠*DBC* is an obtuse

angle.

∠*ABD*

Using a protractor, *m*∠*ABD* = 50.

50 < 90, so ∠*ABD* is an acute angle.

**a.**

*C*

*B*

*A*

*D*

*P*

*Q*

2

1

3

*R T*

*S*

**Classify each angle as**

**Example 2**

**Example 1**

*C*

*A*

1

*B*

PERIOD

NAME DATE









**ALGEBRA In the figure and are opposite rays.**

**bisects ∠*CBE*.**

**Exercises**

**ALGEBRA In the figure and are opposite rays.**

**bisects ∠*PQT.***

***m*∠*NPR* = *x* + 34, find *x* and find *m*∠*NPR*.**

Since bisects ∠*MPR, ,* or *m*∠ *MPN* = *m*∠ *NPR.*

**Congruent Angles** Angles that have the same measure are **congruent angles.** A ray that divides an angle into two congruent angles is called an **angle bisector.** In the figure, is the angle

bisector of ∠*MPR.* Point *N* lies in the interior of ∠*MPR* and

∠*MPN* ∠*NPR*.

**1-4**

**Study Guide and Intervention** *(continued)*

***Angle Measure***

*Glencoe Geometry*

Chapter 1

**26**

**6.** Let *m*∠1 = *m*∠2. If *m*∠*ABE* = 100 and *m*∠*ABD* = 2(*r* + 5), find *r* and *m*∠*DBE.*

**5.** If *m*∠3 = 6*y* + 2 and *m*∠4 = 8*y* – 14, find *m*∠*CBE.*

**4**. If *m*∠3 = 4*x* + 10 and *m*∠4 = 5*x*, find *m*∠4.

*C*

*B*

*A*

4

1

2

3

**3.** If *m*∠*EBF* = 6*x* + 4 and *m*∠*CBF* = 7*x* – 2, find *m*∠*EBF*.

*F*

*D*

*E*

**2.** If *m*∠*PQS* = 3*x* + 13 and *m*∠*SQT* = 6*x* – 2, find *m*∠*PQT.*

*R*

*Q*

*P*

**1.** If *m*∠*PQT* = 60 and *m*∠*PQS* = 4*x* + 14, find the value of *x*.

*S*

*T*

*m*∠*NPR* = 2*x* + 14

= 2(20) + 14

= 40 + 14

= 54

2*x* + 14 = *x* + 34

2*x* + 14 – *x* = *x* + 34 – *x*

*x* + 14 = 34

*x* + 14 – 14 = 34 – 14

*x* = 20

**Refer to the figure above. If *m* ∠*MPN* = 2*x* + 14 and**

**Example**

*R*

*P*

*N*

*M*

NAME DATE PERIOD





